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MAY 17 2000

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May 1, 2000

FCC MAIL ROOM

To:

Ms Magalie Roman Salas,
Secretary,
Federal Communications Commission,
The Portals,
445 12th Street, S.W.,
WASHINGTON D.C. 20554.

Re: CC Docket 98-147, Line Sharing

Dear Ms Salas,

On Friday, April 28, 2000, Norm Elsasser, Vice President, The Harris Corporation, Alan Stewart, a consultant to Harris, and I met with Doug Cooper, William Kehoe, Jon Reel, and Jessica Rosenworcel of the Common Carrier Bureau, and Shanti Gupta, Paul Marangoni, Kent Nilsson, and Jerry Stanshine of the Office of Engineering and Technology. Mr. Elsasser went through a presentation entitled "Line & Spectrum Sharing," copies of which are attached so that they can be placed in the public record.

On Wednesday, March 29, 2000, Mr. Elsasser, Mr. Stewart, and I met with Staci Pies and Jon Reel of the Common Carrier Bureau, and Shanti Gupta, Paul Marangoni, Kent Nilsson, Doug Sicker, and Jerry Stanshine of the Office of Engineering and Technology. On that occasion Mr. Elsasser gave a presentation entitled "Challenges of Testing in the Unbundled Loop Environment: Cooperation for Deployment of DSL Services," copies of which are attached for the public record.

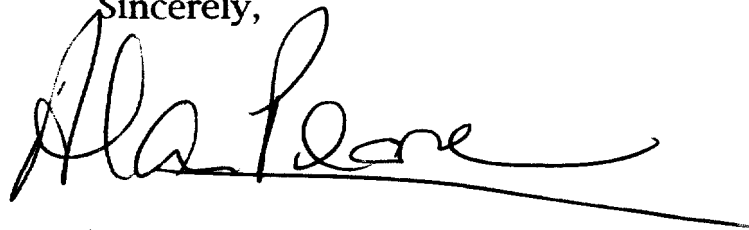
At the time of the first presentation, the Harris Corporation was not aware that the line sharing policy was still under review and therefore subject to the ex parte rule. As you are aware, Harris did not participate in any way in the rulemaking, and still has no official position on the policy adopted by the Commission.

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IAE

An original and one copy of this letter, plus attachments, are being submitted in accordance with Section 1.1206(b) of the Commission's rules.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan Pearce", with a long horizontal flourish extending to the right.

Alan Pearce, Ph.D.,
President,
Information Age Economics Inc.
(Consultant to the Harris Corporation)

cc.

Dr. Kent Nilsson, Dr. Jerry Stanshine, Doug Sicker, Shanti Gupta, Paul Marangoni of OET.

Doug Cooper, William Kehoe, Staci Pies, John Reel, and Jessica Rosenworcel of the Common Carrier Bureau.

The logo for Information Age Economics (IAE), consisting of the letters "IAE" in a bold, stylized font, positioned on a grid background.

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Line & Spectrum Sharing

Federal Communications Commission

April 28th, 2000

Agenda



- Critical Issues related to “Open” Sharing of Spectrum
- Options for Rapid Availability of Spectrum
- Proposed solutions
- Options and Mandates

What is considered “open”



- Available to anyone for no regular charges.
- Any company and or re-seller can access.
- Controlled by the subscriber who uses the loop.
- Used as is.
- Is second priority to Voice Circuit <4kHz.
- Treated as free space similar to 900MHz, 2.4GHz radio spectrum.

Assessing the Loop capabilities



- Pre-qualification tests determine Loop conditions and provide assessment for the loop.
- Any provider can access the Switch test trunk for pre-qualification or have open access to ILEC Test resources.
- Performance assessments are the responsibility of the provider of service not the provider of the loop.
- Conflict resolution rules are needed for incompatible technologies.

Separation of the Loop



- Loop should be separated at the Main Distribution frame for sharing between competing companies.
- CLEC purchases entire loop spectrum and split this in their own equipment for resale to other providers.
- Consumer can control who they want to own their access loop.
- Alternatively should portions of the Loop spectrum be Licensed like Radio spectrum?

Definition Of Spectrum Management



- The term spectrum management refers to processes that are intended to minimize the potential for crosstalk interference and maximize the utility of the frequency spectrum in multipair metallic loop cables.
- The spectrum management requirements and recommendations in standards include signal power limitations, technology deployment guidelines, and a generic analytical method that can be used to define new DSL spectrum management classifications or determine the spectral compatibility of different technologies. The requirements and recommendations in standards are intended to provide spectral compatibility with certain defined basis loop transmission systems and thereby maximize the use of the bandwidth provided by metallic loop cables.

Options for Spectrum Availability

What are High Speed Services



- High speed services are defined as non-switched loop transmission systems which use transmission techniques which rely on frequencies above the voice band (4 kHz).
- High speed services can be Video, Data and Special circuits such as ISDN, T1 etc.

Methods to Assess Spectrum Computability



- PSD Standards are being set by ANSI/ITU/IEEE and others
- Compatibility and compliance tests need to be developed
- Certification needs to be used similar to the current FCC part 15 tests for emissions.
- Needs to be controlled and managed by a common organizational body

Various Types of Access Lines



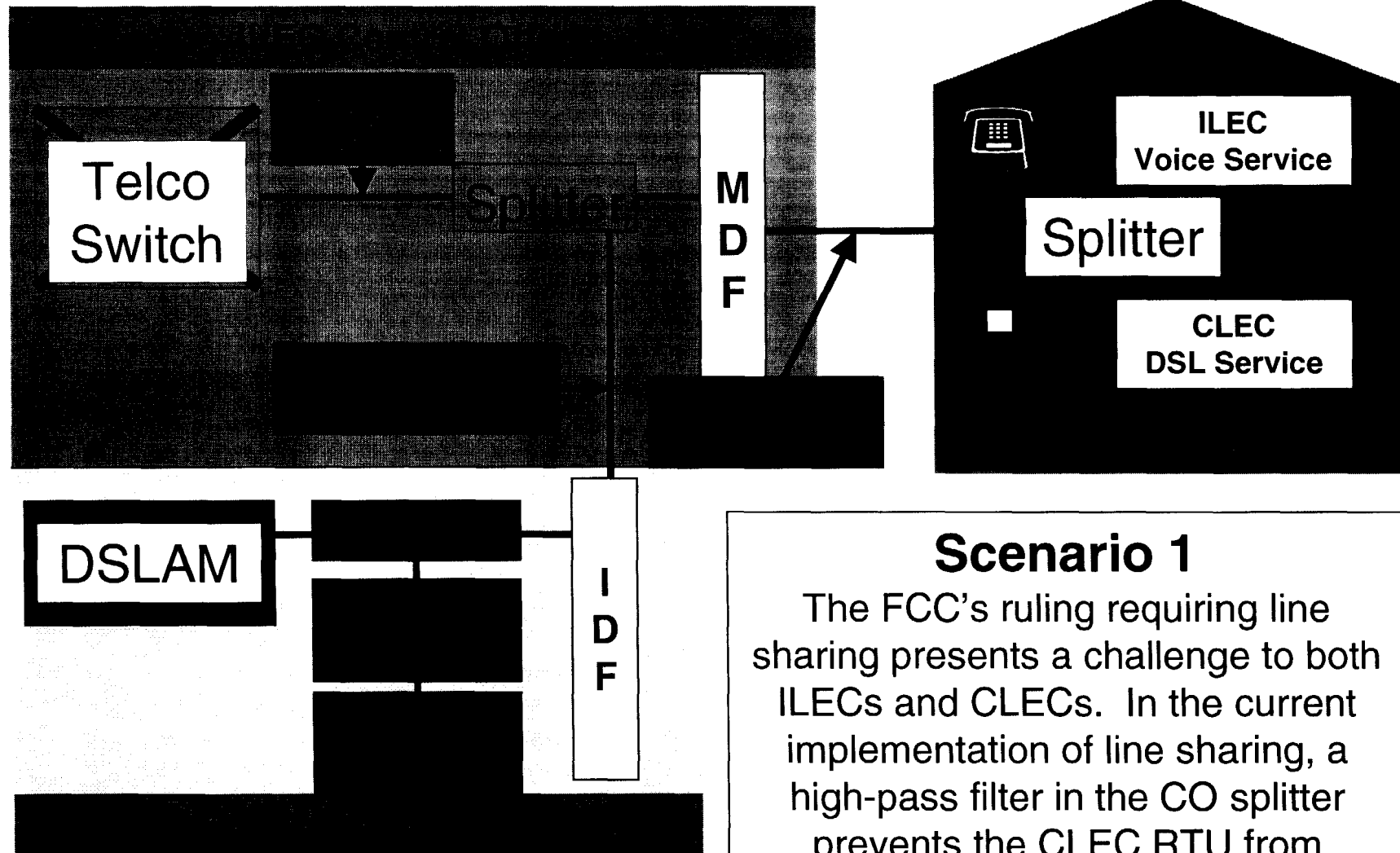
- Shared lines within a carrier service area i.e. those lines that are typically less than 12kft.
- Rural loops that are typically between 12kft and 18kft.
- Special loops that are greater than 18kft.
- Bulk of current service is in the CSA area.
- Technology is extending the reach of high speed data.
- Fiber to DLC loops are not currently available.



Possible Solutions

ILEC Location Option

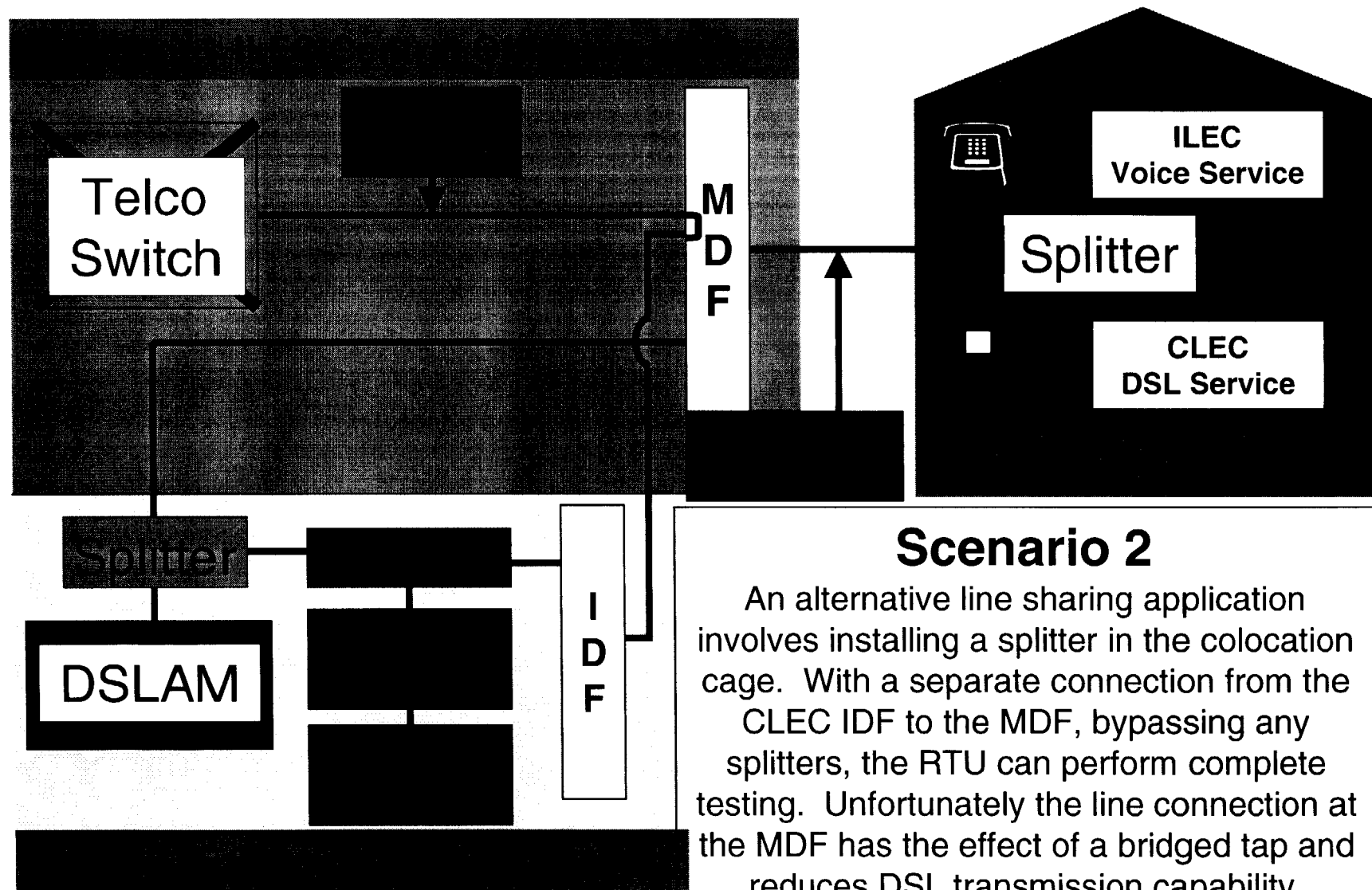
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Scenario 1

The FCC's ruling requiring line sharing presents a challenge to both ILECs and CLECs. In the current implementation of line sharing, a high-pass filter in the CO splitter prevents the CLEC RTU from performing a complete circuit test.

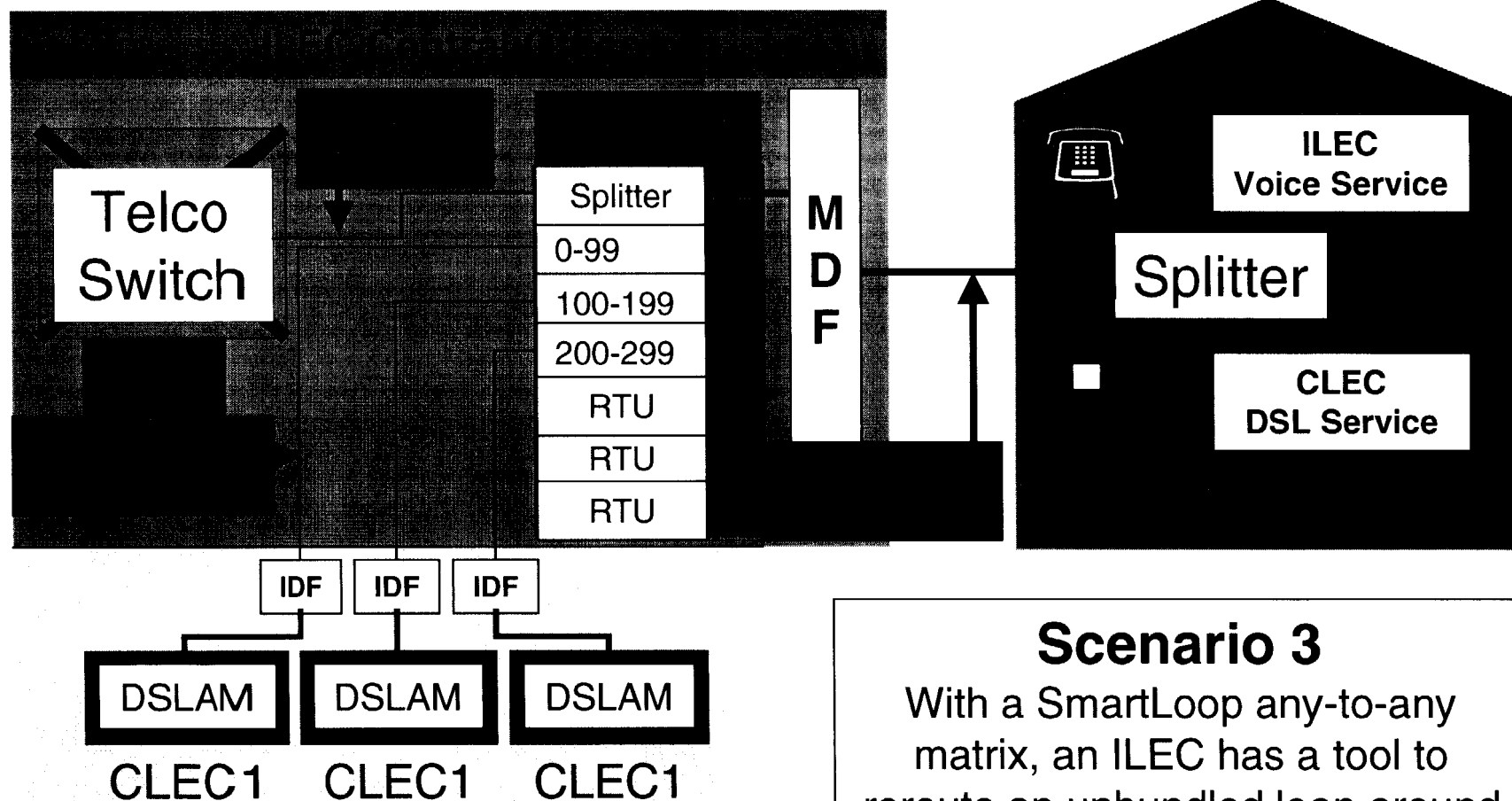
CLEC Location Option



Scenario 2

An alternative line sharing application involves installing a splitter in the colocation cage. With a separate connection from the CLEC IDF to the MDF, bypassing any splitters, the RTU can perform complete testing. Unfortunately the line connection at the MDF has the effect of a bridged tap and reduces DSL transmission capability.

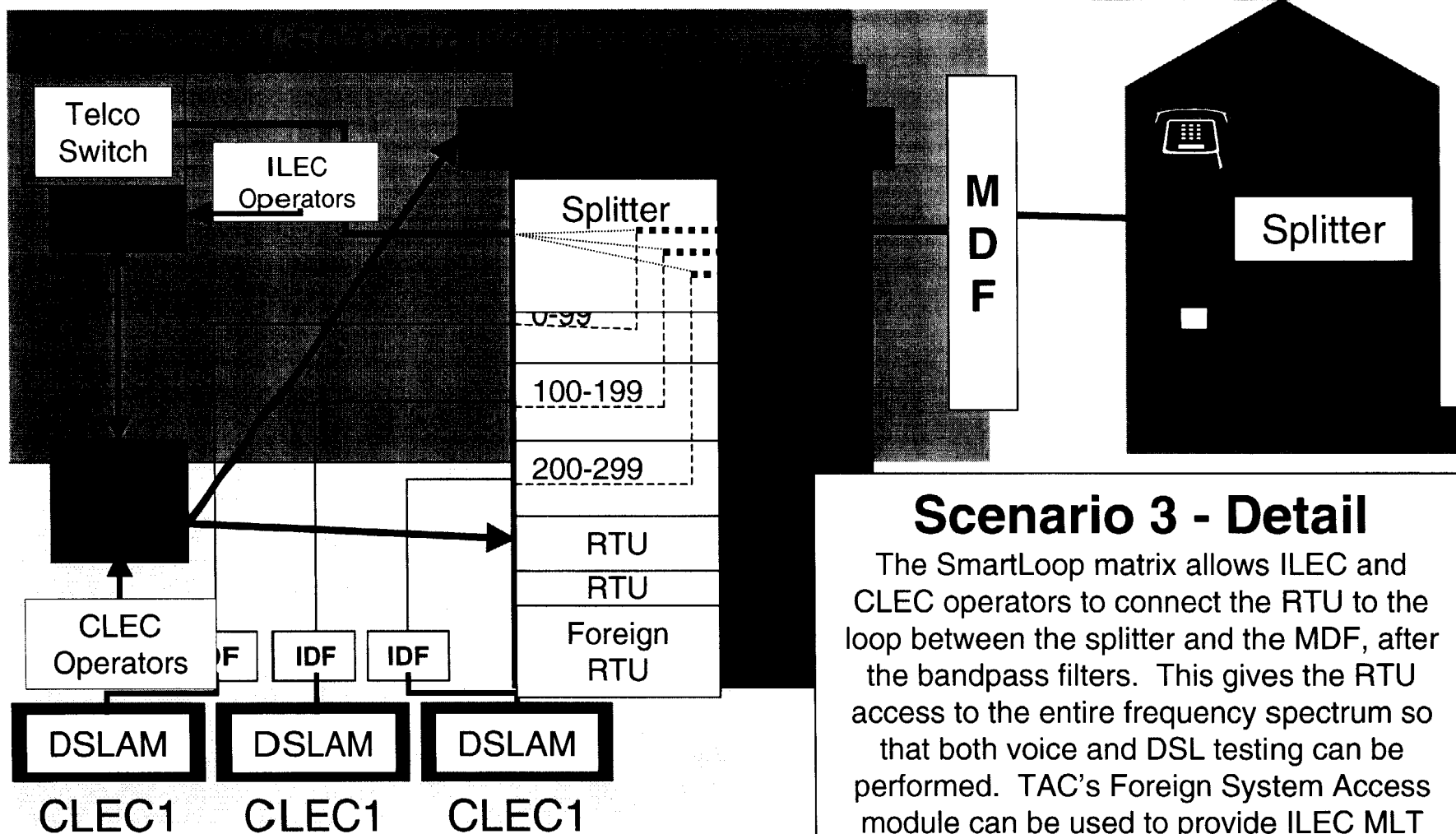
Shared Space Option



Scenario 3

With a SmartLoop any-to-any matrix, an ILEC has a tool to reroute an unbundled loop around the splitter when testing is needed.

Shared Space Detail



Scenario 3 - Detail

The SmartLoop matrix allows ILEC and CLEC operators to connect the RTU to the loop between the splitter and the MDF, after the bandpass filters. This gives the RTU access to the entire frequency spectrum so that both voice and DSL testing can be performed. TAC's Foreign System Access module can be used to provide ILEC MLT operators with the ability to operate the SmartLoop matrix and perform testing.

Methods for Cooperative Interfacing

Interface Options



- OSS integration.
- Third Party Gateway.
- Cost....Who should pay for the solution.
- Regulation of fair play.
- Open systems that are available now I.e. Interactive Voice Access.

IVA

Interactive Voice Access

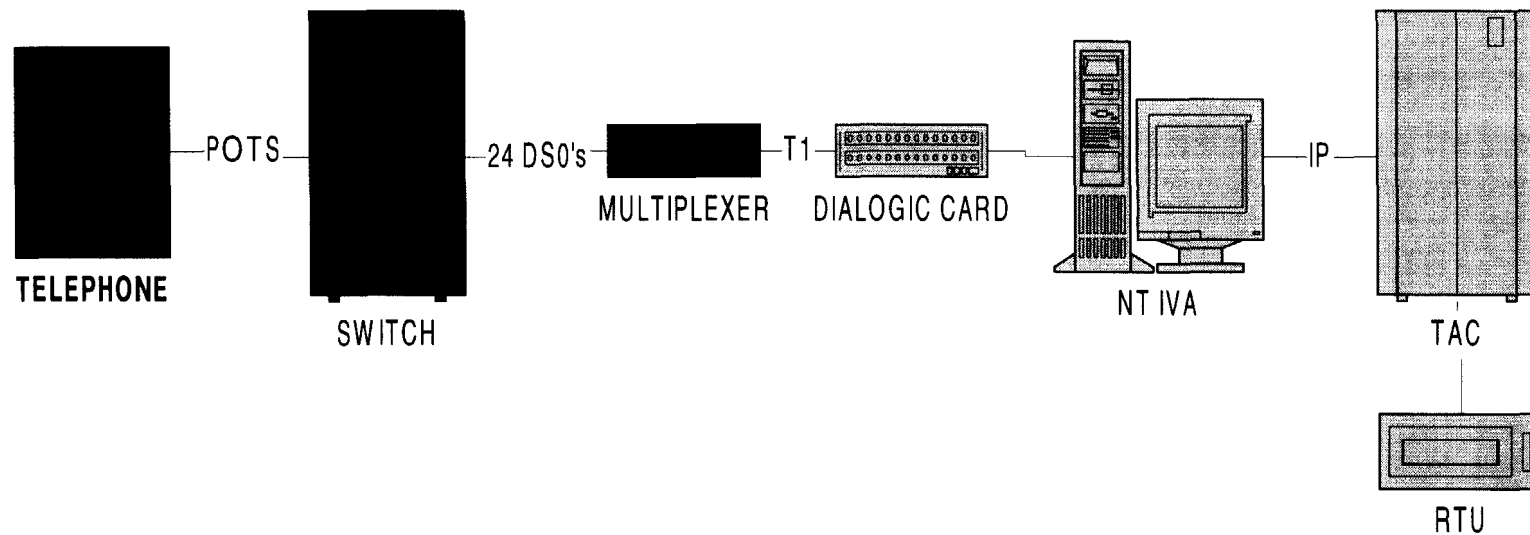
- IVA Service
 - Operates as a Windows NT Service
- IVA Administrator
 - GUI to the IVA Service
 - Provides tools to configure, monitor, initiate, and terminate IVR Service
- IVA Script Editor
 - Drag and Drop GUI to build custom IVA scripts
 - Can reside on server or networked PC
 - Allows customers to build their own Flows

Hardware Requirements

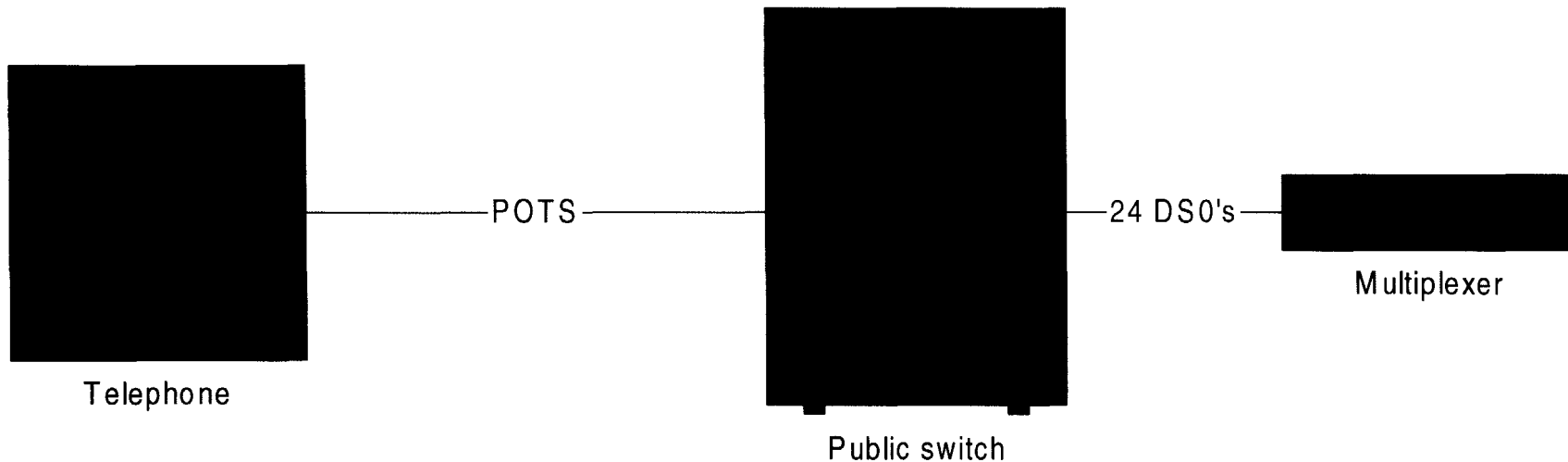


- Server resides on NT workstation
- Supports up to 48 ports per Server
- Uses standard PC dialogic card
 - Available in 12, 24, 48 port configurations

Hardware Connectivity

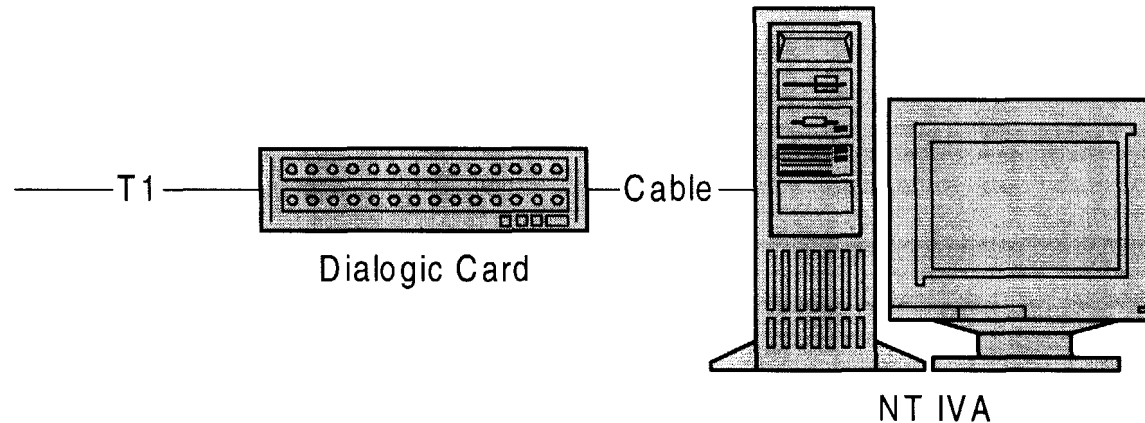


IVA Process



- The Access Number is Called from Any Phone
- The Call is Processed to a Hunt Group.
- The Hunt Group is Muxed into a T1

IVA Process



- The T1 is Routed to the Dialogic Card
- The T1 is DeMuxed into 24 DS0's
- The Call is Answered by the IVA System